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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,491	01/18/2001	Jack L. Arbiser	EU 98055 CON	8772
23579	7590	07/01/2004	EXAMINER	
PATREA L. PABST PABST PATENT GROUP LLP 400 COLONY SQUARE SUITE 1200 ATLANTA, GA 30361			KIM, JENNIFER M	
			ART UNIT	PAPER NUMBER
			1617	

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/765,491	Applicant(s) ARBISER, JACK L.	
	Examiner Jennifer Kim	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-6, 10-12 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6, 10-12, 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 4-6 and 17-19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the treatment of the **specific** "angiogenesis inhibitor", does not reasonably provide enablement for the **terms** "collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted oxindole derivatives, tetracyclines inhibiting collagenase and a sulfated polysaccharides" and its **effective amounts**. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

3. Enablement is considered in view of the Wands factors (MPEP 2164.01(a)). These include: nature of the invention, breadth of the claims, guidance of the specification, the existence of working examples, predictability of the prior art, state of the prior art and the amount of experimentation necessary. All of the **Wands factors**

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have been considered with regard to the instant claims, with the most relevant factors discussed below.

Nature of the Invention: All of the rejected claims are drawn to a method of treating or inhibiting specific skin disorders set forth in claims 4 and 17 utilizing **collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted oxindole derivatives, tetracyclines inhibiting collagenase or a sulfated polysaccharides**. The nature of the invention is extremely complex in that it encompasses the actual treatment and inhibition of a skin disorders including a cell proliferation disorder such that the subject treated with **any** above compound does not contract the specific skin disorders set forth in claims 4 and 17.

Breath of the Claims: The complex of nature of the claims greatly exacerbated by breath of the claims. The claims encompass treating or inhibiting including specific skin disorders in humans which has potentially many different causes (i.e. many different mutations or combination of mutations). Each of which may or may not be addressed by the administration of the claimed compounds. Claims 4-6 and 17-19 **embrace any** of collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted oxindole derivatives, tetracyclines inhibiting collagenase or a sulfated polysaccharides; however, only a very few of the claims broad class of the compounds are supported by the specification.

Guidance of the Specification: The guidance given by the specification as to how one would administer **any** of the claimed **compounds** to a subject in order to actually inhibit the specific skin disorder is **minimal**. **There is no guidance to what are the effective amounts of any** of collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted oxindole derivatives, tetracyclines inhibiting collagenase or a sulfated polysaccharides to be employed. All of the guidance provided by the specification is directed towards specific angiogenesis inhibitor such as curcuminoids including curcumin.

Working Examples: All of the working examples provided by the specification are directed toward the **specific angiogenesis inhibitor such as curcuminoids including curcumin** with its effective amounts rather than administration of broad range of any angiogenesis inhibitors such as collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted oxindole derivatives, tetracyclines inhibiting collagenase and a sulfated polysaccharides.

State of the Art: While the state of the art is relatively high with regard to treatment of skin disorder employing specific angiogenesis inhibitors, the state of the art with regard to treatment or inhibition employment of **any** angiogenesis inhibitors including collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted

oxindole derivatives, tetracyclines inhibiting collagenase and a sulfated polysaccharides is underdeveloped.

Predictability of the Art: The lack of significant guidance from the specification or prior art with regard to the actual administration of broad class of compounds including collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted oxindole derivatives, tetracyclines inhibiting collagenase and a sulfated polysaccharides and lack of significant guidance from the specification of effective amount of the compounds in a human subject, with the specific skin disorders makes practicing the claimed invention unpredictable in terms of treating specific skin disorders by administration of the broad class of compounds such as collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted oxindole derivatives, tetracyclines inhibiting collagenase and a sulfated polysaccharides.

The amount of Experimentation Necessary: In order to practice claimed invention, one of skilled in the art would have to first envision a combination of appropriate pharmaceutical carrier, compound dosage, duration of treatment, route of administration, etc. and appropriate animal model system for one of the claimed compounds and test the combination in the model system to determine whether or not the combination is effective for treatment of the specific skin disorders. If unsuccessful, which is likely given the lack of significant guidance

from the specification or prior art regard treatment of specific skin disorders with any compound, one of skill in the art would have to then either envision a modification of the first combination of pharmaceutical compound, compound dosage, duration of treatment, route of administration, etc. and appropriate animal model system, or envision an entirely new combination of the above, and test the system again. If again unsuccessful, which is likely given the lack of significant guidance from the specification of prior art regarding treatment or inhibition with any compound, with any amount, the entire, unpredictable process would have to be repeated until successful. Therefore, it would require undue, unpredictable experimentation to practice the claimed invention to treat or inhibit the development of specific skin disorders in a subject by administration of the claimed compounds.

Therefore, a method of treating or inhibiting in a subject specific skin disorders administering **any** of collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted oxindole derivatives, tetracyclines inhibiting collagenase or a sulfated polysaccharides **not** considered to be **enabled** by the instant specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-6 and 10-12 and 18-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

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subject matter which applicant regards as the invention. The term "symptoms" in claims 4 and 10 is vague and indefinite since it is not clear what are the symptoms associated with the disorders to be treated since it is not defined in the specification what the symptoms that are being treated.

The term "amount effective" in claims 4 and 17 is indefinite since it is not clear what are the "effective amount" to be employed in the active agents (collagenase inhibitors, angiogenic fumagillin derivatives, 2,5-diaryltetrahydrofurans, aminophenylphosphonic acid compounds, 3-substituted oxindole derivatives, tetracyclines inhibiting collagenase or a sulfated polysaccharides) in order to inhibit angiogenesis without clear guidelines of effective amounts of the agents being utilized.

The remaining claims 5, 6, 11, 12, 18 and 19 are indefinite to the extent that they depend from claims 4, 10 or 17.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 10-12 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Aggarwal (WO 95/18606) of record evidenced by Doland's Medical Dictionary (1994) of record.

Aggarwal teach method for the treatment of melanomas comprising administration of effective dose of curcumin (mixture of demethoxycurcumin). (page 5, lines 20-32, page 6). That applicant may have determined a mechanism of elevated basic fibroblast growth factor in the disorder by which the active ingredient gives the pharmacological effect does not alter the fact that the compound has been previously used to obtain the same pharmacological effects which would result from the claimed method. The patient, condition to be treated and the effect are the same. An explanation of why that effect occurs does not make novel, the treatment of the conditions encompassed by the claims.

Doland's Medical Dictionary teaches that term melanoma refers to malignant melanoma. (page 1004, under melanoma).

Doland's Medical Dictionary was cited as extrinsic evidence to show the equivalence of the term melanoma as malignant melanoma.

Claim 17 is rejected under 35 U.S.C. 102(e) as being anticipated by Golub et al. (U.S. Patent No. 6,015,804).

Golub et al. report that the tetracycline minocycline (tetracyclines inhibiting collagenase) is effective in treating dystrophic epidermolysis bullosa. (column 4, lines 10-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Reilly et al. (U.S. Patent No. 5,733,876) of record in view of Brem et al. (U.S. Patent No. 6,482,810B1) and further in view of Doland's Illustrated Medical Dictionary, 1994 of record.

O'Reilly et al. teach neurofibromas is a disease mediated by angiogenesis and can be treated by inhibiting angiogenesis. (abstract, column 5, lines 15-26, column 10, lines 1-6).

O'Reilly et al. do not expressly teach the collagenase inhibitors for the treatment of neurofibromatosis.

Brem et al. teach tetracyclines inhibiting collagenase such as minocycline is effective inhibitors of angiogenesis. (column 3, lines 43-46 and column 2, lines 60-64).

Doland's Medical Dictionary teaches under "neurofibromatosis" on page 1129, that neurofibromatosis is a condition of having multiple neurofibromas.

It would have been obvious to one of ordinary skill in the art to employ collagenase inhibitors including minocycline for the treatment of neurofibromatosis because neurofibromatosis also known as having multiple neurofibromas which is mediated by angiogenesis as taught by O'Reily et al. and because collagenase inhibitors such as minocycline is useful angiogenesis inhibitor. One would have been motivated to employ collagenase inhibitor (e.g. minocycline) with a reasonable expectation of successfully treating the disease mediated by angiogenesis by employing well-known angiogenesis inhibitor, tetracyclines inhibiting collagenase.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Reilly et al. (U.S. Patent No. 5,733,876) of record in view of Andrulis Jr. et al. (U.S. Patent No. 5654312) of record and further in view of Doland's Illustrated Medical Dictionary, 1994 of record.

O'Reilly et al. and Doland's Medical Dictionary as applied as before.

O'Reily et al. do not expressly teach thalidomides for the treatment of neurofibromatosis.

Andrulis Jr. et al. teach that thalidomides are effective angiogenesis inhibitor. (abstract, column 1, lines 47-48, lines 55-56). Andrulis Jr. et al. teach thalidomides may

be administered topically. (column 4, lines 55-60, and column 6, line 18, line 43 and line 57).

It would have been obvious to one of ordinary skill in the art to employ thalidomide for the treatment of neurofibromatosis because neurofibromatosis is well-known by Doland's Illustrated Medical Dictionary as having multiple neurofibromas which is mediated by angiogenesis as taught by O'Reilly et al. and because thalidomides are effective angiogenesis inhibitor as taught by Andrulis Jr. et al. One would have been motivated to employ thalidomide with a reasonable expectation of successfully treating a disease mediated by angiogenesis in order to achieve effective angiogenesis inhibition as taught by Andrulis Jr. et al.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Reilly et al. (U.S. Patent No. 5,733,876) of record in view of Teicher et al. (U.S. Patent No. 5,776,898) and further in view of Doland's Illustrated Medical Dictionary, 1994 of record.

O'Reilly et al. and Doland's Illustrated Medical Dictionary as applied as before.

O'Reilly et al. do not expressly teach angiogenic fumagillin derivatives such as TNP-470 for the treatment of neurofibromatosis.

Teicher et al. teach that TNP-470 is an antiangiogenic agent. (column 7, lines 40-41, column 17, lines 40-50).

It would have been obvious to one of ordinary skill in the art to employ angiogenic fumagillin derivative such as TNP-470 for the treatment of neurofibromatosis

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because neurofibromatosis is well-known by Doland's Illustrated Medical Dictionary as having multiple neurofibromas which is mediated by angiogenesis as taught by O'Reilly et al. and because TNP-470 is an angiogenesis inhibitor as taught by Teicher et al. One would have been motivated to employ TNP-470 with a reasonable expectation of successfully treating a disease mediated by angiogenesis (e.g. neurofibromatosis) in order to achieve effective angiogenesis inhibition of TNP-470 as taught by Teicher et al.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Reilly et al. (U.S. Patent No. 5,733,876) of record in view of Tanaka et al. (U.S. Patent No. 4,900,815) and Brem et al. (U.S. Patent No. 6,482,810B1) and further in view of Doland's Illustrated Medical Dictionary(1994) of record.

O'Reilly et al. teach that pyrogenic granuloma, neurofibromas and hemangioma is a disease mediated by angiogenesis and can be treated by inhibiting angiogenesis. (abstract, column 5, lines 15-26, column 10, lines 1-6).

O'Reilly et al. does not teach the specific angiogenesis inhibitor, i.e. sulfated polysaccharide DS4152 for the treatment of hemangioma of childhood, neurofibromatosis and pyrogenic granuloma.

Tanaka et al. teach the sulfated polysaccharide, DS4152 is useful as an angiogenesis inhibitor.

Brem et al. teach tetracyclines inhibiting collagenase such as minocycline is effective inhibitors of angiogenesis. (column 3, lines 43-46 and column 2, lines 60-64).

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Doland's Medical Dictionary teaches under "hemangioma" on page 740, that hemangioma occur most commonly in childhood. Doland's Medical Dictionary teaches on page 1129 that neurofibromatosis is a condition of having multiple neurofibromas.

It would have been obvious to one of ordinary skill in the art to employ sulfated polysaccharide, DS4152 or tetracyclines inhibiting collagenase such as minocycline for the treatment of pyrogenic granuloma, neurofibromatosis and hemangioma of childhood because the disease such as pyrogenic granuloma, neurofibromas and hemangioma are mediated by angiogenesis as taught by O'Reilly et al. and because a sulfated polysaccharide, DS4152 and tetracycline inhibiting collagenase such as minocyclines are useful angiogenesis inhibitors as taught by Tanaka et al. and Brem et al. Further more, hemangioma occurs most commonly in childhood and neurofibromatosis is a condition of having multiple of neurofibromas. One would have been motivated to employ the sulfated polysaccharide and tetracyclines inhibiting collagenase having antiangiogenesis activity with a reasonable expectation of successfully treating the disease mediated by angiogenesis.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galardy (U.S. Patent No. 5,696,147) of record and Arbiser et al. (June, 1999) of record in view of Thalloor et al. (1998) of record.

Galardy discloses that conditions including angiosarcoma and Kaposi's sarcoma benefit from angiogenesis inhibition (column 14, lines 64-66). Galardy discloses that

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inhibition of angiogenesis is envisioned as a component of effective treatment of malignancy. (column 2, lines 20-23).

Arbiser et al. (June, 1999) on the abstract, teach that clinical trial of angiogenesis inhibitors in humans with angiosarcoma and hemangioendothelioma are warranted since angiogenesis inhibitors are highly effective in treatment of angiosarcoma in mice.

The references do not teach a curcuminoid for the treatment of the disorders set forth in claim 10.

Thaloor et al. teach that curcumin inhibits angiogenesis.

It would have been obvious to one of ordinary skill in the art to employ curcumin (curcuminoid) for the treatment of the disorders set forth in claims 10 and 18 because Galardy discloses those conditions (i.e. angiosarcoma, Kaposi's sarcoma) to benefit from angiogenesis inhibition and associated with angiogenesis as taught by Arbiser et al. and because curcumin is an angiogenesis inhibitor as taught by Thaloor et al. One would have been motivated to employ curcumin for the treatment of angiogenesis related disorders set forth in claim 10 to achieve expected benefit of angiogenesis inhibition by curcumin as taught by Thaloor et al. The utilization of curcuminoid (e.g. demethoxycurcumin) is obvious because curcumin is a product with contains demethoxycurcumin. Absent any evidence to contrary there would have been a reasonable expectation of successfully treating angiogenesis related disorders with angiogenesis inhibitor (i.e. curcumin).

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Claims 10-12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arbiser et al. (June, 1999) of record in view of Thaloor et al. (1998) of record.

Arbiser et al. on the abstract, teach that patients with recessive dystrophic epidermolysis bullosa (RDEB) are suggested to treat with angiogenesis inhibitors. Arbiser et al. also teach that the patients with RDEB have elevated levels of basic fibroblast growth factor (bFGF) and that angiogenesis inhibitors may antagonize the effects of bFGF. Arbiser et al. teach that there are currently no other means of treatment for the disorder, which has a high morbidity and mortality rate.

Arbiser et al. lack curcumin and demethoxycurcumin.

Thaloor et al. teach that curcumin inhibits angiogenesis.

It would have been obvious to one of ordinary skill in the art to employ curcumin or curcuminoids (i.e. demethoxycurcumin) for the treatment of RDEB because Arbiser et al. suggested that angiogenesis inhibitors are effective in treatment of RDEB and because it is obvious to one of ordinary skill in the art that curcumin is a curcuminoids with as a mixture of demthoxycurcumin. One would have been motivated to employ curcumin (mixture of demethoxycurcumin), a well known by Thaloor et al. as an angiogenesis inhibitor, for the treatment of RDEB to avoid death of a patient with RDEB since angiogenesis inhibitors are currently only treatment available for the patients with RDEB disorder, which as a high morbidity and mortality rate.

Response to Arguments

Applicant's arguments filed on March 1, 2004 have been fully considered but they are not persuasive. Applicant argues that Arbiser 1998 does not demonstrate a clear link between RDEB and angiogenesis. This is not persuasive because Arbiser clearly suggests as a result a novel treatment for RDEB, namely, angiogenesis inhibitors, which antagonize the effects of bFGF in this disorders. Therefore, with Arbiser's suggestion that angiogenesis inhibitors antagonize the effects of bFGF in RDEB would motivate one of ordinary skill in the art to employ well-known angiogenesis inhibitor by Thaloor et al., namely, curcumin for treatment of RDEB to antagonize the effects of bFGF in RDEB. Applicant next argues that results of the study of Thaloor are limited to in vitro assays and do not suggest the administration of a curcuminoid to a patient or treatment of the specific disease recited in the claims. This is not persuasive because Thaloor demonstratives curcumin having antiangiogenesis activity. One of ordinary skill in the art would have been motivated to employ curcumin in treatment of the specific diseases recited in the claims since the specific diseases are highly effective with angiogenesis inhibitors as taught by Arbiser et al. Thus, the claims fail to patentably distinguish over the state of the art as represented by the cited references.

None of the claims are allowed.

Al Alousi et al. is withdrawn as a reference.

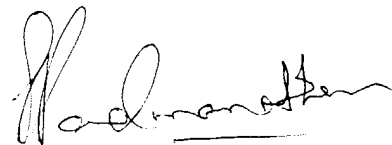
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Any rejection of record not addressed herein is withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Kim whose telephone number is 571-272-0628. The examiner can normally be reached on Monday through Friday 6:30 am to 3 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sreenivasan Padmanabhan
Supervisory Examiner
Art Unit 1617